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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,752	01/27/2004	Zenya Nagashima	075834.00450	1915

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EXAMINER

PENG, CHARLIE YU

ART UNIT	PAPER NUMBER
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2883

DATE MAILED: 07/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/765,752

Applicant(s)

NAGASHIMA, ZENYA

Examiner

Charlie Peng

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 5-9 is/are rejected.
- 7) ☒ Claim(s) 3 and 4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. 10/765,752.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Drawings*

Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, and 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 4,421,384 to McMahon. McMahon teaches an optical device having an optical fiber **63** having, at one end, a first end face **66** is inclined at 45° with respect to the optical fiber **63** axis,  
a second end face **65**,

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an optical source **61** or light emitting element for emitting light,

an optical detector **72** for receiving light, i.e. a circuit for converting an optical signal to an electric signal,

the second end face **65** optically coupled and facing the general direction (another end of the optical fiber) of the optical source **61**,

the first end face **66** optically coupled and facing the general direction (another end of the optical fiber) of the optical detector **72**,

wherein an inputted light beam, from the optical source, following a first light path **64** is reflected by the first end face **66** and outputted, to the optical detector, following a second light path **72**,

and a light path corresponding to the outputted light beam to the optical detector is substantially perpendicular to the optical fiber **63** axis,

the optical detector **72** is outside a maximum diffusion range of the light emitted by from the light source so that the optical detector only receives a reflected light beam from the optical source. (See at least Fig. 4 and its description) However, McMahon does not specifically state a photoreceptor receiving the reflected optical signal instead of an optical detector or the optical source being a surface-emitting semiconductor laser. It is well known to those having ordinary skill in the art at the time the invention was made that an optical detector can be used as a photoreceptor, and a surface-emitting semiconductor laser can be used as an optical source, i.e., US Patent 6,704,334. It would have been obvious to modify the McMahon invention by substituting an optical detector and a surface-emitting semiconductor for items **72** and

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61, respectively. The motivation would be that an optical detector would optimize and convert an optical signal to an electric signal, and that a surface-emitting semiconductor laser has advantages of a low threshold voltage, low power consumption, and easy making of a circular spot of light.

With specific reference to claim 5, McMahon teaches that the fiber 63 can be a fiber core 63. (Column 5, line 30)

### ***Allowable Subject Matter***

Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. McMahon teaches the optical module comprising an optical fiber having an end face with an inclined part to form a reflecting surface 66, an optical source, and an optical detector. However, McMahon does not teach a support member for the optical source being attached to the end face of the optical fiber as abutted thereto. It would not have been an obvious combination to one having ordinary skill in the art to attach the support member to an inclined end face 65 of the optical fiber 63. It is therefore the examiner's opinion that the prior art of record, taken alone or in combination, fails to disclose or render obvious in combination with the rest of the limitations of the base claim.

Claim 4 is also objected to as being dependent upon a rejected base claim, but would be allowable by virtue of being dependent upon an allowable claim 3.

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**Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. For example, U.S. Patent 5,999,670 also teaches all limitations as recited in independent claim 1. Please see form PTO-892 for additional references cited.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charlie Peng whose telephone number is (571) 272-2177. The examiner can normally be reached on 9 am - 6 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Charlie Peng  
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20 July 2005

  
**KAVEH KIANNI**  
**PRIMARY EXAMINER**

Kaveh Kianni  
Primary Examiner